

Sailing information: books, videos and websites.

Books

| Title | Author | Year | Price |
|-------|--------|------|-------|
|-------|--------|------|-------|

General Sailing

| | | | |
|---|-------------|---------|--------------|
| <u>Catamaran Sailor, A News Magazine for ALL Small-Cat Sailors</u> | Mary Wells | current | \$15.00 |
| <u>Learning to Sail the Hobie Way</u> <i>A good little book (20 pages) to get you started or to introduce your friends to sailing.</i> | Hobie Cat | 1984 | out of print |
| <u>The Handbook of Sailing</u> <i>An excellent general sailing book for monohulls and cats. Great illustrations and photos.</i> | Bob Bond | 1992 | \$21.00 |
| <u>Catamaran Sailing from Start to Finish</u> | Phil Berman | 1982 | \$21.95 |
| <u>Catamaran Crewing from Start to Finish</u> <i>Both are good general books, but a little dated and don't cover newer boats.</i> | Phil Berman | | \$19.00 |
| <u>Hobie Cat Sailing</u> <i>A great book of vintage photos and early Hobie Cat data.</i> | Jake Grubb | 1979 | out of print |

Racing and Performance Sailing

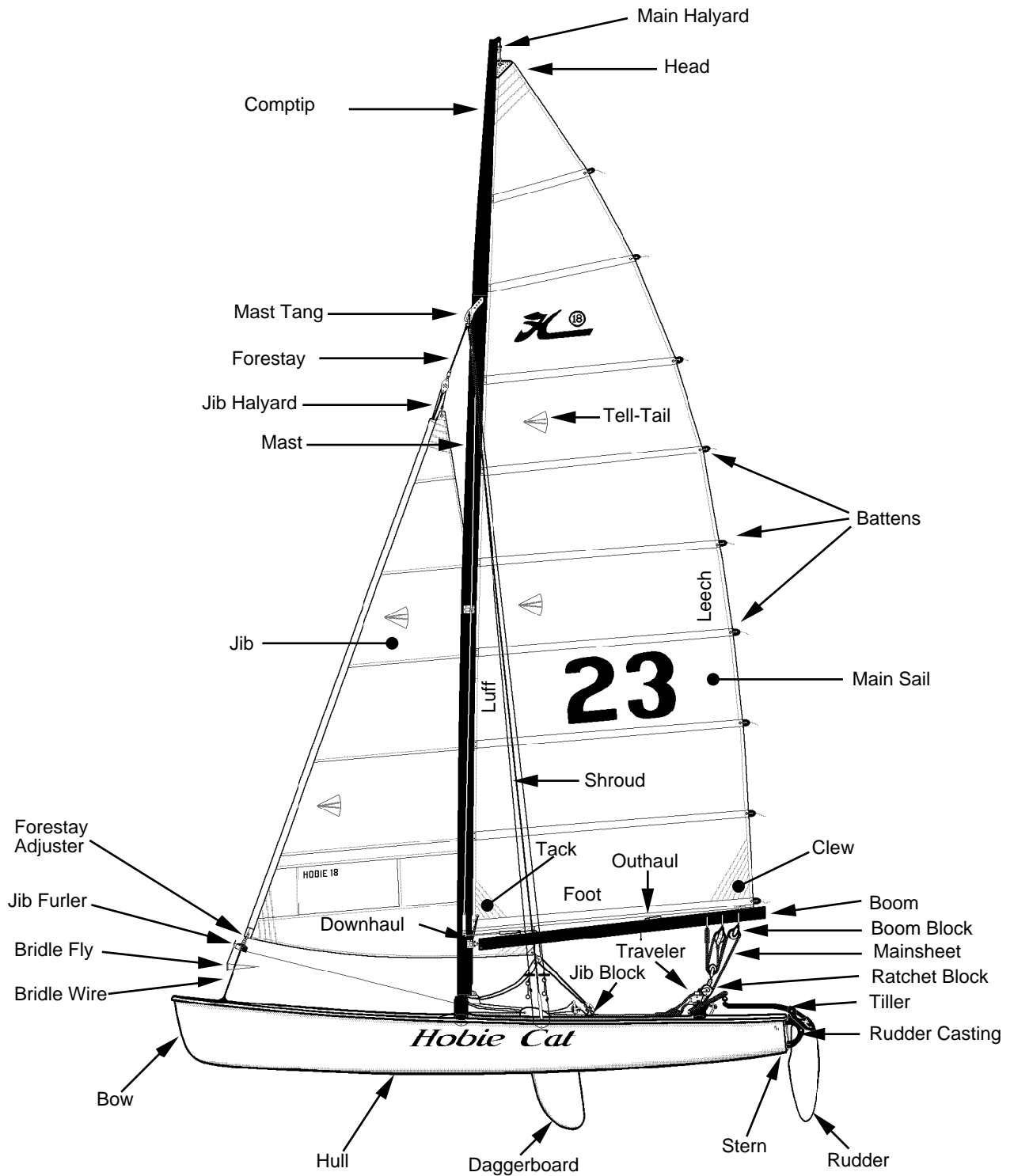
| | | | |
|--|----------------------------|------|---------|
| <u>Catamaran Racing: for the 90's</u> <i>An excellent book for racers and non-racers alike. Should be in everyone's library.</i> | Rick White & Mary Wells | 1992 | \$29.95 |
| <u>Catamaran Racing</u> <i>Small (94 pages) but good book on general sailing and racing. (out of print, limited quantities available)</i> | Kim Furniss & Sarah Powell | 1993 | \$15.00 |
| <u>Tactics</u> | Rodney Pattison | 1986 | \$18.95 |
| <u>Wind Strategy</u> | David Houghton | 1986 | \$18.95 |
| <u>Tides & Currents</u> <i>The above three books are part of a great series from Great Britain.</i> | David Arnold | 1986 | \$22.38 |
| <u>Advanced Catamaran Racing</u> <i>Good book from Australia on tactics, tuning, crew work and attitude.</i> | Scott Anderson | 1985 | |
| <u>Welcome to A-Fleet, Book I: Boatspeed</u> | Jack Sammons | 1982 | \$19.00 |
| <u>Welcome to A-Fleet, Book II: Tactics</u> <i>Both are good basic books for the racer. A little dated and doesn't cover newer boats.</i> | Jack Sammons | 1977 | \$19.00 |
| <u>Sailors Startup</u> <i>A beginners guide to sailing</i> | | 1994 | \$9.95 |
| <u>Sailing Drills</u> | Rick White | 1995 | \$30.00 |
| <u>The Catamaran Tuning Guide</u> | Michael Fragale | 1999 | \$30.00 |

Sailing information: books, videos and websites continued.

| Title | Author | Year | Price |
|--|-----------------|------------|---|
| Right-of-Way and Racing Rules | | | |
| <u>The Racing Rules of Sailing</u> <i>The basic rules.</i> | US Sailing | 2001 | \$12.50 |
| <u>Understanding the Yacht Racing Rules</u> <i>Excellent text and illustrations. If you only own one rules book, this should be it.</i> | Dave Perry | 2001 | \$26.00 |
| Boat Tuning and Maintenance | | | |
| <u>The Hobie 16 Performance Manual</u> | Phil Berman | 1984 | \$19.00 |
| <u>The Hobie 18 Performance Manual</u> <i>Both are excellent references to help set up, tune and sail your boat fast.</i> | | | \$19.00 |
| <u>Hobie Assembly Manual</u> (14, 16, 17, 18, 20 & 21) <i>Basic set of books on assembly & set-up of your Hobie, with illustrated parts breakdowns.</i> | Hobie Cat | price each | \$5.00 |
| Videos | | | |
| <u>Catamaran Sailing, A Step by Step Guide</u> <i>This video is an excellent introduction Hobies, don't miss it.</i> | Brian Heffernan | 1994 | \$28.95 |
| <u>Catamaran Racing</u> (40 minutes) | Brian Heffernan | | \$28.00 |
| <u>Hobie Cat Factory Rigging Videos</u> (14, 16, 17, 21 sport) | | price each | \$14.95 |
| <u>Rick White's Video Sailing Series</u> (a collection of 5 videos, 36-40 minutes each) <i>(Titles include: Boat handling, Upwind, Starts and finishes, Mark roundings, Downwind, Tactics and windshifts)</i> | | price each | \$29.95 |
| Websites | | | |
| International Hobie Class Association (IHCA) <i>Information on the Hobie Class and the Hobe Class Rules.</i> | | | www.hobieclass.com |
| North American Hobie Class Association (NAHCA) <i>Information on the North American region of the IHCA</i> | | | www.nahca.org |
| US Sailing <i>Information on racing, sailing rules, Multihull Council and Committee, etc.</i> | | | www.ussailing.org |
| International Sailing Federation (ISAF) <i>Information on racing, official sailing rules, etc.</i> | | | www.sailing.org |
| Hobie Cat Co. USA | | | www.hobiecat.com |
| Hobie Cat Europe | | | www.hobie-cat.net |
| Catamaran Sailor | | | www.catsailor.com |
| Yahoo beachcat discussion group | | | http://groups.yahoo.com/group/beachcats |

Hobie Cat Anatomy

The Hobie 18



GLOSSARY

Abeam - At right angles to the centerline of the hulls.

Aft - In or near the stern. To the back or behind the boat.

Apparent Wind - To those aboard a boat in motion, the direction from which the wind appears to blow. The sum of the true wind and the wind created by the boats forward motion. See the “**Apparent Wind**” section in this book.

Batten - A fiberglass strip inserted into a pocket in the sail to support the leach and provide shape.

Block - A seagoing pulley through which lines and sheets run.

Bow - The forward or front end of the boat.

Chainplate - A metal strip, connected to the hull or bridle wire, to which shrouds or forestay are attached.

Cleat - A device used to hold a sheet or line, such as a jib sheet cleat. (i.e. cam cleats, jam cleats, etc.).

Clew - The lower aft corner of the jib or mainsail.

Close-Hauled - Sailing upwind as close to the wind as possible (all sails trimmed in).

Downwind - Sailing with the wind or in the same direction as the wind(sails trimmed out). (2) To leeward.

Ease - To let out a sheet or line, as in easing out the sail.

Footing - Sailing to windward slightly below an optimum course (the opposite of pinching).

Furl - To roll up a sail, typically wound around the forestay.

Gudgeon - The fitting on the stern into which the rudder pin is inserted.

Halyard - A line to raise a sail. A main halyard for raising the main and a jib halyard for raising the jib.

Harden - To trim in the sheets (opposite of easing the sheets). To harden up is to sail closer to the wind.

Header - A wind shift that shifts toward the bow and thus makes you steer below your previous course to avoid luffing or losing speed. Headers work against you when sailing upwind, but aid in downwind.

Head Off - To steer away from the wind or turn off the wind. The opposite of head up.

Head-To-Wind - With the bow headed into the wind. The boat will come to a stop and then back up.

Head Up - To steer the boat toward the wind. The opposite of head off.

Hobie - Means fast fun on the water.

Irons - A boat is in irons when it is pointing into the wind and unable to bear away on either tack

Jib - The triangular shaped front sail.

Jibe - Passing from one down wind tack to another by swinging the stern of the boat through the wind.

Lay - To sail a course that will clear a point of land, mark or buoy on the desired side. Also called “fetch”.

Layline - The line leading up to a windward mark along which you can sail an optimum close-hauled course and lay the mark, or the line down to a leeward mark, along which you sail fastest to the mark.

Lazy Sheet - The windward jib sheet, which has no pressure on it. The leeward jib sheet bears the load.

Leech - The rear edge of the jib or mainsail

Leeward - The side of the boat that is down wind. (2) Away from the wind or down wind (such as a leeward boat).

Lift - A wind shift that shifts toward the stern and thus allows you to sail a higher course in order to maintain the same angle with the wind. Lifts work against you when sailing downwind.

Line - Every rope used on a boat except a sheet or bolt rope

Luff - The forward edge of a sail. (2) to turn the boat toward or into the wind, to luff up. (3) a flapping sail.

Mainsheet - The line used to trim or adjust the mainsail.

Overlap - The positioning of two boats, in close proximity and on the same course, the bow of the boat astern extending past the stern of the forward boat. Overlap can establish right-of-way.

Overstand - To sail farther past a mark or layline than is necessary before tacking for it or rounding it.

Pinch - To sail too close to the wind. Boat's speed and power fall off greatly.

Pointing - A boat's level of efficiency in sailing to windward. (2) Sailing as close to the wind as the boat's design will allow. (3) Sailing closer to the wind than another boat, is called pointing higher.

Port - The left side of a boat. Port and Starboard are important terms, as left and right can become confusing

Rake - The tilting of the mast forward or aft. Rake is used to move the sails center of effort, forward or aft.

Reach - All points of sailing between a beat (close-hauled) and a run (straight down wind)

Run - The point of sail with the wind directly behind the boat, a very slow way to sail downwind on a Cat.

Sheet - A line for controlling a sail or boom in relation to the wind

Sloop - A single-masted sailboat with a large mainsail and a single working jib

Snuffer-A spinnaker retrieval/launching system where a retrieval line is led through a long spinnaker bag and tied to the middle of the spinnaker.

Spinnaker - a large triangular sail set on a long light pole and used when running before the wind

Stall - The slowing effect from sheeting the sails too tightly in relation to the wind direction or falling off (turning down wind) without easing the sails. The leeward telltales will stop flowing to the rear.

Starboard - The right side of a boat

Starboard Tack - Sailing with the wind coming over the starboard side of the boat.

Stern - The rear end of a boat

Tack - To come about; to change the course of the boat by bringing the bows through the wind so that the wind is now on the opposite side. (2) The relationship of a sailboat with respect to the wind. If the wind comes over the starboard side, you're on starboard tack; if the wind comes over the port side, you're on port tack.

Telltale - A short piece of ribbon, plastic, yarn or feather attached to sails and/or shrouds for the purpose of reading wind direction and for monitoring sail trim.

True Wind – The wind as provided by mother nature and felt when on stationary objects. See “**Apparent Wind**” in this book.

Traveler - A stern mounted, movable car, on a horizontal track, that is connected to the mainsheet for the purpose of controlling the boom and sail trim; also used for fore-aft and inboard-out-board jib lead locations.

Unirig - A boat with only a mainsail, such as the Hobie 14 and 17.

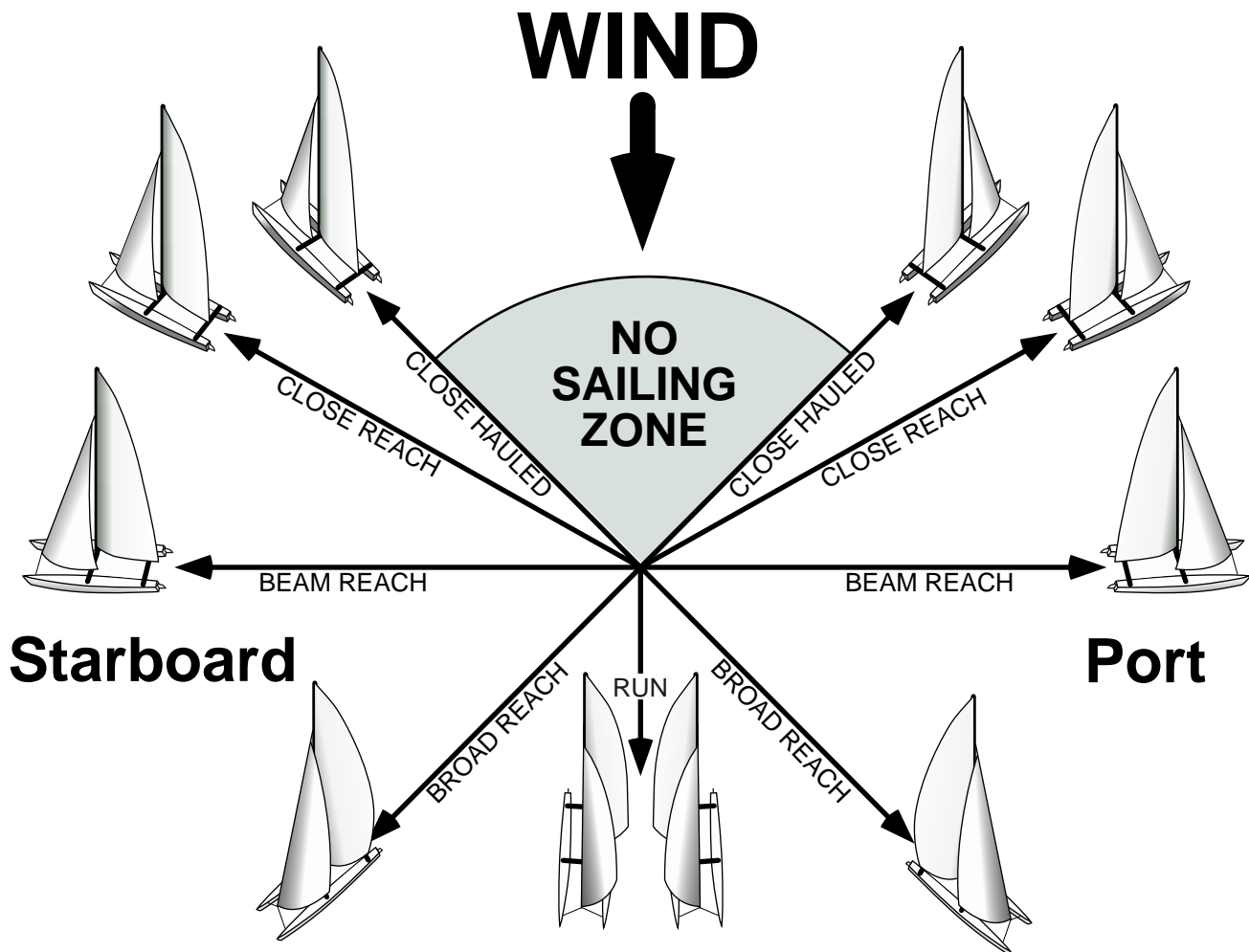
Upwind - Sailing close-hauled toward the wind. (2) To windward

Weather - Indicating the side toward the wind, also known as windward; "to weather" is to windward

Weather Helm - The boat having a tendency to head into the wind if the tiller is released.

Windward - The side of the boat the wind hits first. (2) Sailing toward the wind. (3) A boat or object up wind.

Points of Sail



Other than sailing into the wind (no sailing zone), you can sail in any direction that you want. The different directions that you can sail in relation to the wind, are called points of sail. As a boat changes from one point of sail to another, the sails must be adjusted so that they maintain the same relationship or angle to the wind.

No sailboat can sail directly into the wind, but a catamaran can sail effectively to within 45° of the wind. The top two boats in this diagram are both sailing close hauled, but one is on port tack and the other is on starboard tack. Sailing this close to the wind requires that the sails be pulled in tight.

As you head your boat further off the direction of the true wind, you must let your sails out so that the wind flows across the sail correctly (keep the leeward telltales flying).

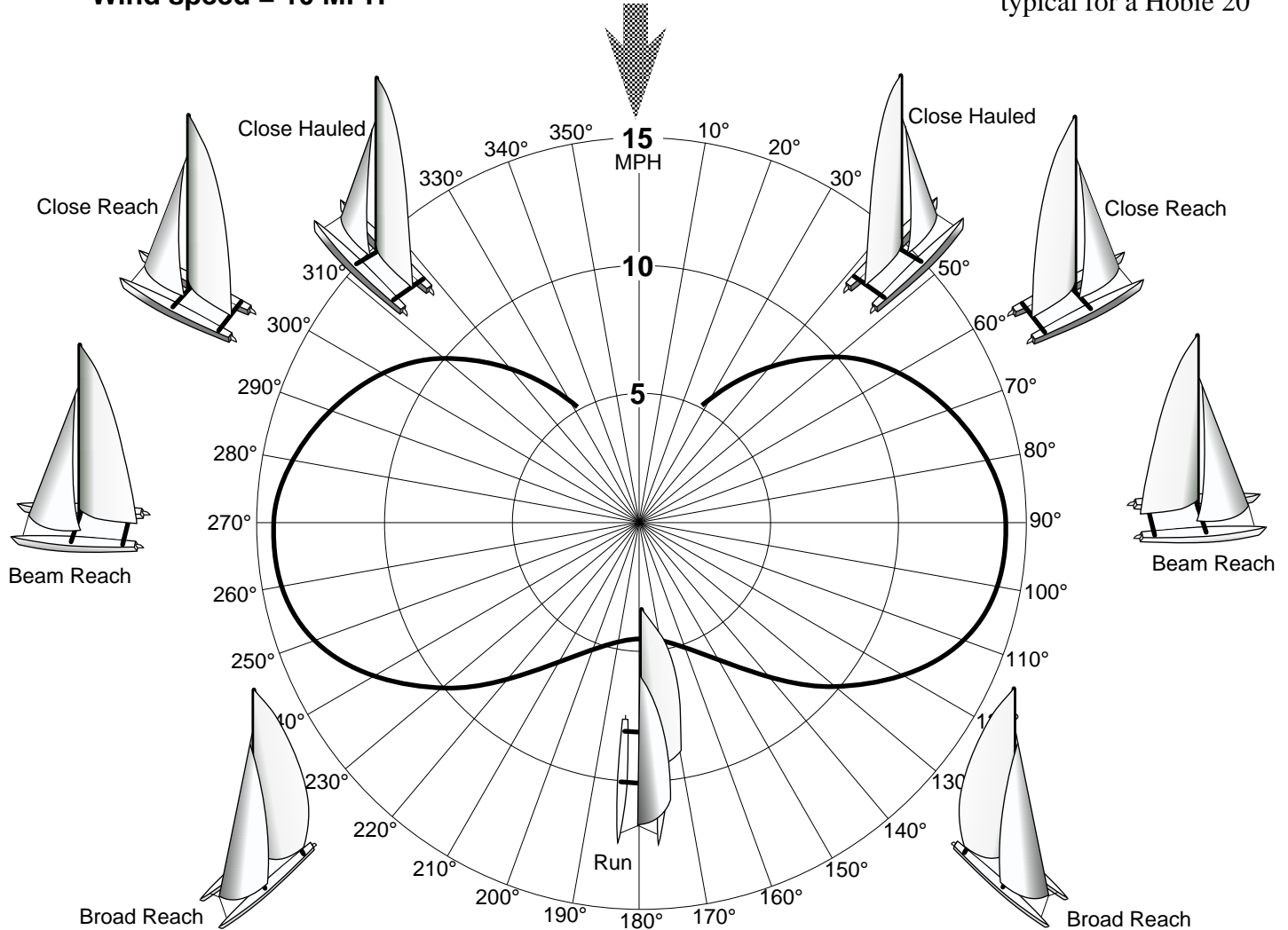
If you sail too close to straight down wind, the sail can not work effectively and the boat slows down. Tacking down wind from broad reach to broad reach is much faster than going straight down wind.

Points of Sail vs. Boat Speed

Wind speed = 10 MPH

WIND

This speed data is typical for a Hobie 20



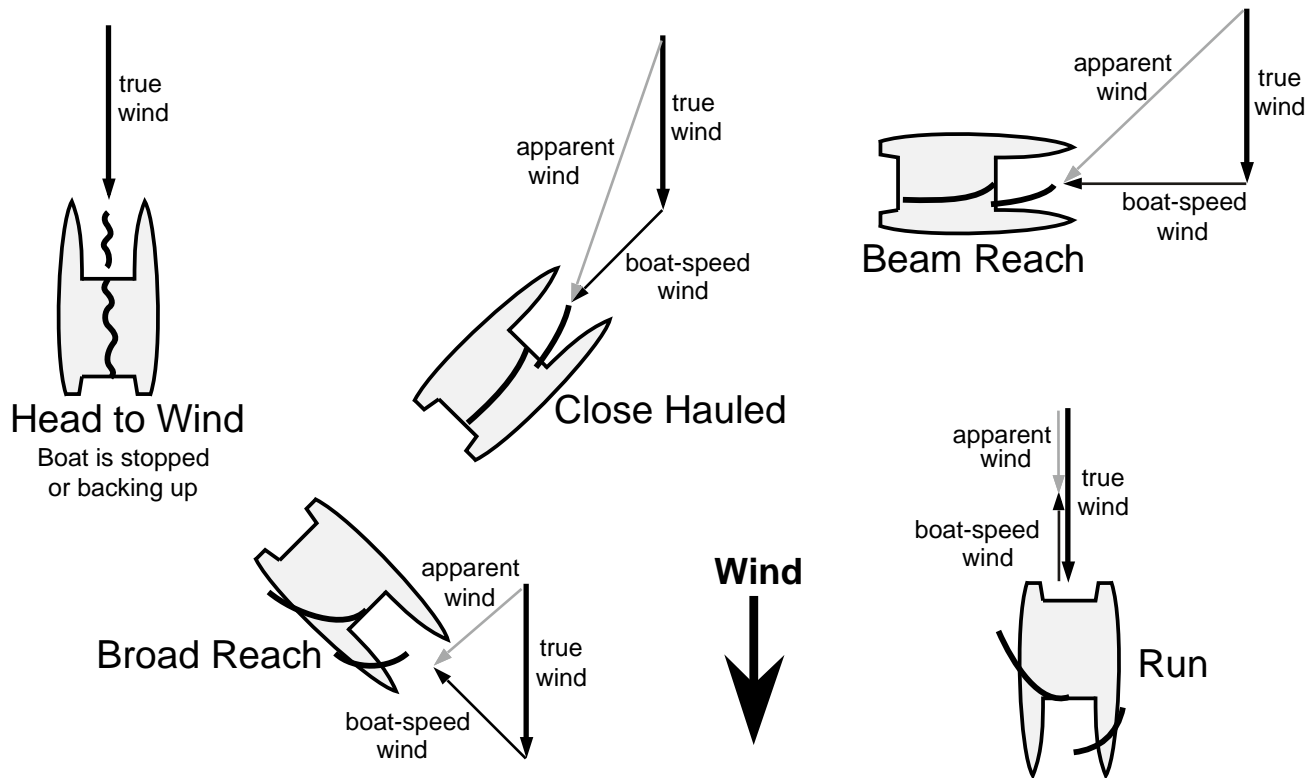
The heavy line on this graph shows the speeds that a catamaran can achieve when sailing on different points of sail, with the wind at 10 miles per hour. The heavy line shows that the highest speed is achieved on a beam reach, where a cat can do 14 MPH; that is faster than the speed of the wind.

The graph also shows that doing straight down wind is very slow, with boat speed of less than 5 miles per hour. If you sail 50° left or right of straight down wind, you can do 10 miles per hour. Sailing off on a broad reach and then jibing and sailing back to the center will cause you to travel farther, but by traveling twice as fast, you still come out way ahead. Again the point is to keep the sail generating forward lift (working like a wing) by keeping the leeward telltales flowing. Note: Telltale location is critical, also don't expect smooth airflow across the entire sail especially on a broad reach. Telltales all over the sail are not only worthless, but are very distracting.

Upwind is similar to down wind in that if you take the shortest route, you go very slow. If you foot off you have better speed, but will have to sail extra distance. If you foot off too much, you have great speed, but the increased distance becomes too great. So where is that magic point that gets you upwind the quickest? It is close to 45° from the true wind which is about 30° off the apparent wind. There is no easy answer to finding this point, if there were, sailboat racing would be as easy as pushing on the gas pedal. The fastest point of sail varies with boat type, wind speed, water condition, crew weight, etc.; but, **IF IN DOUBT, FOOT!!** The next chart "Upwind courses, What is optimum?" will show you why this is true. Sailing upwind with other boats will help you learn how to trim your sails and to find that magic point or "groove" on your boat.

Data Reference - "*Aero-Hydrodynamics of Sailing*" by C. A. Marchaj, page 87

Apparent Wind



Apparent Wind is the wind that the sailors and the sails feel as the boat moves across the water. *Apparent wind* is the product of two forces, first is the *True Wind* that mother nature provides and second is the wind created by the forward motion of the boat (*boat speed wind*). To sail fast, or to sail at all in light air, you must set your sails in the correct relationship to the *apparent wind*. Any change in the *apparent wind* will require changes in sail trim or boat direction. A basic understanding of *apparent wind* is helpful in dealing with the varying conditions that you will encounter.

As I said, the *apparent wind* is the product of the *true wind* and the wind created by the motion of your boat. Because *apparent wind* is the product of these two forces, it is affected by changes in either force. If the *true wind's* speed increases or decreases, the *apparent wind* will change in both velocity and direction. If the *true wind's* direction changes, the *apparent wind* will again change. If your boat accelerates or decelerates, the wind speed your boat creates will change, causing a change in the *apparent wind*.

To graphically demonstrate how changes in *true wind* and *boat speed wind* effect the *apparent wind* we will use vectors (arrows) which show both the speed and direction of each wind. The direction of the vectors (arrows) show the direction each wind is blowing and the length of each vector indicates its strength or speed of the wind in MPH.

The *boat speed wind* always blows from the direction that the boat is traveling, as depicted in the diagrams above. The speed or strength of the *boat speed wind* is equal to the boats speed and thus I have shown the strongest *boat speed wind* when the boat is on a beam reach, which is the fastest point of sail. For simplicity, in the diagrams above, the *true wind* remains the same in each diagram.

Note, in the diagram, how the sails have been changed as the boat goes from close hauled to beam reach to broad reach. As the boat and the *apparent wind* change direction, the sails are changed to keep the sails leading edge cutting the *apparent wind* and the rest of the sail gently bending the wind.

